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Mineral Industry Surveys

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CHROMIUM IN APRIL 2005

On the basis of gross weight, consumption of chromium ferroalloys and metal in April 2005 increased 8% compared with consumption in March 2005, according to the U.S. Geological Survey.

Included in this Mineral Industry Surveys are U.S. salient chromium statistics, U.S. Government stockpile inventory of chromium materials in April 2005, consumption by end use and consumer stocks of chromium ferroalloys and metal at the end of April 2005, and U.S. foreign trade data for selected chromium-containing materials in March 2005.

Update

The Defense National Stockpile Center (DNSC) anticipated to exceed a self-imposed sales ceiling of 72,575 metric tons (t) for high-carbon ferrochromium in FY 2005, but did not plan to change its total ferrochromium (high-carbon and low-carbon) sales ceiling of 99,790 t (Defense National Stockpile Center, 2005b).

DNSC announced the April sale of 22,210 t of ferrochromium comprising 18,146 t of high-carbon ferrochromium and 4,064 t of low-carbon ferrochromium. The sale was valued at $24.1 million or $0.486 per pound, gross weight (Defense National Stockpile Center, 2005a). DNSC announced the May sale of 9,797 t of ferrochromium comprising 8,890 t of high-carbon ferrochromium and 907 t of low-carbon ferrochromium. The sale was valued at $9.9 million or $0.458 per pound, gross weight (Defense National Stockpile Center, 2005c).

References Cited

Defense National Stockpile Center, 2005a, Stockpile accepts ferrochromium offers: Defense National Stockpile Center, News Release DNSC-05-2607, May 9, 1 p.

Defense National Stockpile Center, 2005b, Stockpile announces change in ferrochromium sales level for fiscal year 2005: Defense National Stockpile Center, News Release DNSC-05-2611, May 25, 1 p.

Defense National Stockpile Center, 2005c, Stockpile announces ferrochromium sales for May 2005: Defense National Stockpile Center, News Release DNSC-05-2562a, February 24, 1 p.

TABLE 1
U.S. SALIENT CHROMIUM STATISTICS[1]

(Metric tons, gross weight)

	2004	2005				
	January-December[2]	February	March	First quarter	April	January-April
Production:						
Stainless steel production[3]	2,000,000	183,000	210,000	610,000	206,000	817,000
Components of U.S. supply:						
Stainless steel scrap receipts	787,000	63,400	60,300	186,000	65,500	252,000
Stainless steel scrap consumption	1,120,000	89,200	87,300	268,000	94,700	363,000
Imports for consumption:						
Chromite ore	153,000	25,300	4,690	39,700	NA	39,700 [4]
Ferrochromium:						
More than 4% carbon	398,000	39,900	20,700	117,000	NA	117,000 [4]
More than 3% carbon but not more than 4% carbon	30 [r]	18	--	18	NA	18 [4]
More than 0.5%, but not more than 3% carbon	5,720	576	150	2,430	NA	2,430 [4]
Not more than 0.5% carbon	31,400	4,650	3,330	11,100	NA	11,100 [4]
Ferrochromium silicon	30,600	4,020	475	10,200	NA	10,200 [4]
Total ferroalloy imports	466,000	49,200	24,600	141,000	NA	141,000 [4]
Chromium metal[5]	9,610	998	816	3,020	NA	3,020 [4]
Stainless steel	811,000	74,100	72,400	218,000	NA	218,000 [4]
Stainless steel scrap	146,000	11,400	10,000	31,800	NA	31,800 [4]
Distribution of U.S. supply:						
Consumption, industry, chromium ferroalloys and metal	432,000	32,200	34,200 [r]	105,000	36,900	141,000
Exports:						
Chromite ore	43,100	1,540	7,910	12,000	NA	12,000 [4]
Chromium ferroalloys:						
High-carbon ferrochromium	6,580	439	2,910	3,690	NA	3,690 [4]
Low-carbon ferrochromium	1,410	1,700	121	1,900	NA	1,900 [4]
Ferrochromium silicon	1,150	8	20	48	NA	48 [4]
Total ferroalloy exports	9,140	2,150	3,050	5,630	NA	5,630 [4]
Chromium metal	931	35	66	205	NA	205 [4]
Stainless steel	323,000	28,600	37,700	92,300	NA	92,300 [4]
Stainless steel scrap	478,000	52,800	53,200	138,000	NA	138,000 [4]
Stocks at end of period:						
Consumer, industry, chromium ferroalloys and metal	XX	11,400	12,400	XX	12,300	XX
Government stockpile:						
Chromium ferroalloys	XX	566,000	555,000	XX	546,000	XX
Chromium metal	XX	6,190	6,190	XX	6,190	XX

[r]Revised. NA Not available. XX Not applicable. -- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]May include revised data.

[3]Data on stainless steel production reported by American Iron and Steel Institute; monthly, quarterly, and year-to-date production of stainless and heat-resisting raw steel.

[4]Includes January through March data; April data not available.

[5]Includes waste and scrap and other.

TABLE 2
U.S. REPORTED CONSUMPTION AND STOCKS
OF CHROMIUM PRODUCTS IN 2005[1, 2]

(Metric tons, gross weight unless otherwise noted)

	March	April	January-April[3]
Consumption by end use:			
Alloy uses:			
Iron alloys:			
Steel:			
Carbon steel	355	306	1,570
High-strength low-alloy steel	645	640	2,530
Stainless and heat-resisting steel	29,000	31,800	121,000
Full alloy steel	1,830 r	1,760	6,830
Electrical steel	W	W	W
Tool steel	429	479	1,790
Unspecified steel	W	W	W
Cast irons	W	W	W
Superalloys	884 r	912	3,400
Other alloys[4]	69	70	267
Total	34,200 r	36,900	141,000
Total, chromium content	20,000 r	21,200	82,200
Consumption by material:			
Low-carbon ferrochromium	1,830 r	1,900	7,860
High-carbon ferrochromium	28,900 r	31,200	120,000
Ferrochromium silicon	2,770	3,120	11,500
Chromium metal	439 r	452	1,700
Chromite ore	W	W	W
Chromium-aluminum alloy	31	31	120
Other chromium materials	W	W	W
Total	34,200 r	36,900	141,000
Total, chromium content	20,000 r	21,200	82,200
Consumer stocks:			
Low-carbon ferrochromium	2,070	2,000	XX
High-carbon ferrochromium	8,800 r	8,790	XX
Ferrochromium silicon	1,260	1,300	XX
Chromium metal	151 r	183	XX
Chromite ore	W	W	XX
Chromium-aluminum alloy	25	26	XX
Other chromium materials	W	W	XX
Total	12,400	12,300	XX
Total, chromium content	7,290 r	7,190	XX

rRevised. W Withheld to avoid disclosing company proprietary data; included in "Total."
XX Not applicable.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Includes estimates.

[3]May include revised data.

[4]Includes welding and alloy hard-facing rods and materials; wear- and corrosion-resistant alloys; and aluminum, copper, magnetic, nickel, and other alloys.

TABLE 3
U.S. GOVERNMENT STOCKPILE INVENTORY
OF CHROMIUM MATERIALS[1, 2]

(Metric tons)

Period	Chromium ferroalloys		Chromium metal
	High-carbon ferro-chromium	Low-carbon ferro-chromium	
2004:			
April	436,000	209,000	6,660
May	430,000	208,000	6,660
June	425,000	208,000	6,660
July	414,000	208,000	6,670
August	412,000	206,000	6,670
September	408,000	192,000	6,670
October	404,000	192,000	6,670
November	398,000	191,000	6,670
December	398,000	191,000	6,670
2005:			
January	386,000	190,000	6,190
February	378,000	188,000	6,190
March	368,000	187,000	6,190
April	359,000	187,000	6,190

[1]Data are rounded to no more than three significant digits.

[2]These Government stocks are reported by the Defense National Stockpile Center in Inventory of Stockpile Materials R-1, which reports uncommitted inventory. Uncommitted inventory is that inventory for which there is no sales contract. Committed inventory is that inventory for which there is a sales contract, however, the material has not yet been shipped. For chromium materials, the R-1 report includes chromium materials that (1) meet specifications and are held in excess of goal and (2) do not meet specifications and are held in excess of goal. The R-1 report excludes chromium materials that are committed and awaiting shipment.

Source: Defense National Stockpile Center.

TABLE 4

U.S. EXPORTS OF CHROMITE ORE, CHROMIUM FERROALLOYS, AND METAL[1]

Period	Chromite ore		Chromium ferroalloys[2]			Chromium metal[3]	
	Gross weight (metric tons)	Value (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value (thousands)	Gross weight (metric tons)	Value (thousands)
2004:							
March	938	$290	2,440	1,400	$2,940	54	$1,710
April	1,340	359	623	348	735	69	2,230
May	3,920	480	370	198	443	177	1,850
June	11,000	1,570	671	362	931	79	1,400
July	8,180	2,130	713	398	1,000	100	1,570
August	10,200	2,680	533	322	685	93	1,510
September	2,750	1,590	706	401	876	53	1,290
October	823	270	565	347	799	58	1,190
November	507	197	616	398	843	46	1,020
December	771	231	639	388	897	51	657
January-December	43,100	10,400	9,140	5,320	12,000	931	17,600
2005:							
January	2,550	618	427	257	610	103	1,070
February	1,540	404	2,150	1,330	2,910	35	796
March	7,910	1,310	3,050	1,850	4,070	66	983
January-March	12,000	2,330	5,630	3,430	7,590	205	2,850

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Includes low-, medium-, and high-carbon ferrochromium and ferrochromium silicon.

[3]Includes chromium metal waste and scrap and unwrought powders.

Source: U.S. Census Bureau.

TABLE 5

U.S. IMPORTS FOR CONSUMPTION OF CHROMITE ORE, FERROCHROMIUM, AND CHROMIUM METAL[1]

(Metric tons)

	2004	2005		
	January-December[2]	February	March	January-March[2]
Chromite ore:				
More than 40% but less than 46% chromic oxide:				
Gross weight	1,690	147	168	315
Chromic oxide content	761	67	77	144
46% or more chromic oxide:				
Gross weight	151,000	25,200	4,520	39,300
Chromic oxide content	71,600	11,600	2,090	18,200
Total, all grades:				
Gross weight	153,000	25,300	4,690	39,700
Chromic oxide content	72,400	11,600	2,160	18,400
Ferrochromium:				
Low-carbon:[3]				
Not more than 0.5%:				
Gross weight	31,400	4,650	3,330	11,100
Chromium content	21,100	3,140	2,170	7,530
More than 0.5% but not more than 3%:				
Gross weight	5,720	576	150	2,430
Chromium content	3,830	370	105	1,540
Total, low-carbon:				
Gross weight	37,100	5,230	3,480	13,500
Chromium content	24,900	3,510	2,280	9,060
Medium-carbon:[4]				
Gross weight	30 r	18	--	18
Chromium content	16	NA	--	NA
High-carbon:[5]				
Gross weight	398,000	39,900	20,700	117,000
Chromium content	223,000	25,300	11,600	69,300
Total, all grades:				
Gross weight	435,000	45,200	24,100	131,000
Chromium content	248,000	28,800	13,900	78,400
Chromium metal:				
Unwrought powders	1,350	27	94	188
Waste and scrap	61	3	--	3
Other than waste and scrap and unwrought powders	8,200	968	722	2,820
Total, all grades	9,610	998	816	3,020

[r]Revised. NA Not available. -- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]May include revised data.

[3]Ferrochromium containing not more than 3% carbon.

[4]Ferrochromium containing more than 3% carbon but not more than 4% carbon.

[5]Ferrrochromium containing more than 4% carbon.

Source: U.S. Census Bureau.

TABLE 6

U.S. IMPORTS FOR CONSUMPTION OF FERROCHROMIUM IN 2005, BY GRADE AND BY COUNTRY[1]

Grade and country	March			January-March[2]		
	Gross weight (metric tons)	Chromium content (metric tons)	Value[3] (thousands)	Gross weight (metric tons)	Chromium content (metric tons)	Value[3] (thousands)
High-carbon ferrochromium:[4]						
China	--	--	--	5	4	$7
Kazakhstan	--	--	--	30,900	21,300	31,500
Russia	3,190	2,110	$2,390	12,500	8,210	10,300
South Africa	9,650	4,900	6,430	52,600	27,100	33,600
Zimbabwe	7,820	4,620	6,420	21,300	12,700	17,000
Total	20,700	11,600	15,200	117,000	69,300	92,500
Medium-carbon ferrochromium[5], China	--	--	--	18	NA	41
Low-carbon ferrochromium:[6]						
More than 0.5% but not more than 3% carbon:						
India	--	--	--	20	13	17
Kazakhstan	150	105	216	250	175	354
Russia	--	--	--	1,370	917	1,360
South Africa	--	--	--	790	433	877
Total	150	105	216	2,430	1,540	2,610
Not more than 0.5% carbon:						
China	--	--	--	4	3	11
France	--	--	--	4	4	8
Germany	409	285	772	1,090	763	1,990
Japan	160	113	424	459	323	1,210
Kazakhstan	--	--	--	1,320	899	1,920
Russia	2,760	1,780	4,150	8,000	5,430	10,600
South Africa	--	--	--	208	105	93
Total	3,330	2,170	5,350	11,100	7,530	15,900
All grades:						
China	--	--	--	28	26	58
France	--	--	--	4	4	8
Germany	409	285	772	1,090	763	1,990
India	--	--	--	20	13	17
Japan	160	113	424	459	323	1,210
Kazakhstan	150	105	216	32,400	22,400	33,800
Russia	5,950	3,880	6,540	21,900	14,600	22,300
South Africa	9,650	4,900	6,430	53,600	27,700	34,600
Zimbabwe	7,820	4,620	6,420	21,300	12,700	17,000
Total	24,100	13,900	20,800	131,000	78,400	111,000

NA Not available. -- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]May include revised data.

[3]Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

[4]Ferrochromium containing more than 4% carbon.

[5]Ferrochromium containing more than 3% but not more than 4% carbon.

[6]Ferrochromium containing not more than 3% carbon.

Source: U.S. Census Bureau.

TABLE 7

U.S. IMPORTS FOR CONSUMPTION OF CHROMIUM METAL IN 2005, BY GRADE AND BY COUNTRY[1]

Grade and country	March		January-March[2]	
	Gross weight (metric tons)	Value[3] (thousands)	Gross weight (metric tons)	Value[3] (thousands)
Unwrought powders:				
China	22	$137	22	$140
France	--	--	1	43
Germany	1	30	1	38
Japan	31	696	84	1,660
Korea, Republic of	1	22	1	22
Russia	20	100	60	284
Spain	19	83	19	83
United Kingdom	(4)	50	(4)	115
Total	94	1,120	188	2,390
Waste and scrap, Germany	--	--	3	51
Other than waste and scrap and unwrought powders:				
Australia	--	--	(4)	2
Austria	(4)	4	1	8
China	283	1,400	884	4,160
France	163	1,220	544	4,190
Germany	9	85	10	96
India	--	--	1	5
Japan	5	72	19	1,020
Russia	84	440	945	6,130
United Kingdom	177	1,140	421	2,690
Total	722	4,370	2,820	18,300
All grades:				
Australia	--	--	(4)	2
Austria	(4)	4	1	8
China	305	1,540	906	4,300
France	163	1,220	546	4,230
Germany	10	115	15	186
India	--	--	1	5
Japan	36	768	103	2,690
Korea, Republic of	1	22	1	22
Russia	104	540	1,010	6,420
Spain	19	83	19	83
United Kingdom	177	1,190	421	2,810
Total	816	5,490	3,020	20,700

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]May include revised data.

[3]Customs import value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

[4]Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 8

U.S. TRADE OF STAINLESS STEEL, BY PRODUCT, IN 2005[1]

Stainless steel product	March		January-March	
	Gross weight (metric tons)	Value[2] (thousands)	Gross weight (metric tons)	Value[2] (thousands)
Exports:				
Ingot	741	$4,170	1,900	$11,000
Flat-rolled (width > 600 mm)	19,800	51,200	43,700	117,000
Flat-rolled (width < 600 mm)	10,200	38,700	27,800	97,100
Bars and rods in irregular coils	474	1,470	1,380	3,950
Other bars and rods	2,220	12,300	6,900	36,400
Wire	556	3,870	1,530	10,800
Tubes, pipes, hollow profiles	3,690	18,300	9,130	47,800
Total	37,700	130,000	92,300	324,000
Stainless steel scrap	53,200	56,000	138,000	147,000
Grand total	90,900	186,000	230,000	470,000
Imports:				
Ingot	18,000	48,500	44,700	118,000
Flat-rolled (width > 600 mm)	26,800	71,100	91,100	241,000
Flat-rolled (width < 600 mm)	3,170	12,800	10,100	39,700
Bars and rods in irregular coils	3,420	9,930	11,300	31,400
Other bars and rods	9,570	36,400	25,500	99,400
Wire	3,400	14,500	9,970	41,100
Tubes, pipes, hollow profiles	8,010	42,300	24,800	127,000
Total	72,400	236,000	218,000	698,000
Stainless steel scrap	10,000	13,400	31,800	39,600
Grand total	82,400	249,000	249,000	737,000

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Export value is free alongside ship (f.a.s.). Import value is Customs import value, which generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise into the United States.

Source: U.S. Census Bureau.